

5'	CAG	CGC	TCC	CCT	CTA	18	CCT	GGA	GAC	TTG	ACT	CCC	CGC	CGC	CCC	45	AAC	CCT	GCT	TAT	54
63	TTG	ACC	GTC	GAG	TGT	72	CAG	AGA	TCC	TGC	AGC	CGC	CCA	GTC	CCG	99	CCG	GCC	CCT	CTC	108
117	CCC	CCC	CAC	ACC	CAC	126	CCT	GGC	TCT	TCC	TGT	TTT	TAC	TCC	TCC	153	TTT	TCA	TTT	162	
171	ATA	ACA	AAA	GCT	ACA	180	GCT	CCA	GGA	GCC	CAG	CGC	CGG	GCT	GTG	207	ACC	CAA	GCC	GAG	216
225	CGT	GGA	AGA	ATG	GGG	234	TTC	CTC	GGG	ACC	GGC	ACT	TGG	ATT	CTG	261	GTG	TTA	GTG	CTC	270
279	P	I	Q	A	F	288	P	K	P	G	G	S	Q	D	K	315	TCT	CTA	CAT	AAT	324
333	AGA	GAA	TTA	AGT	GCA	342	GAA	AGA	CCT	TTG	AAT	GAA	CAG	ATT	GCT	369	GAA	GCA	GAA	GAA	378
387	GAC	AAG	ATT	AAA	AAA	396	ACA	TAT	CCT	CCA	GAA	AAC	AAG	CCA	GGT	423	CAG	AGC	AAC	TAT	432
	D	K	I	K	K	405	T	Y	P	P	E	N	K	P	G	414	Q	S	N	Y	

FIGURE 1A

441	450	459	468	477	486
TCT TTT GTT	AAC TTG AAC CTG CTA AAG GCA ATA ACA GAA	ATA ACA GAA	AAA ATT		
S F V D N L N L K A I T E K E K I					
495	504	513	522	531	540
GAG AAA GAA AGA CAA TCT ATA AGA AGC TCC CCA CTT GAT AAT AAG TTG AAT GTG					
E K E R Q S I R S S P L D N K L N V					
549	558	567	576	585	594
GAA GAT GTT GAT TCA ACC AAG AAT CGA AAA CTG ATC GAT GAT TAT GAC TCT ACT					
E D V D S T K N R K L I D D Y D S T					
603	612	621	630	639	648
AAG AGT GGA TTG GAT CAT AAA TTT CAA GAT CCA GAT GGT CTT CAT CAA CTA					
K S G L D H K K F Q D D P D G L H Q L					
657	666	675	684	693	702
GAC GGG ACT CCT TTA ACC GCT GAA GAC ATT GTC CAT AAA ATC GCT GCC AGG ATT					
D G T P L T A E D I V H K I A A R I					
711	720	729	738	747	756
TAT GAA GAA AAT GAC AGA GCC GTG TTT GAC AAG ATT GTT TCT AAA CTA CTT AAT					
Y E E N D R A V F D K I V S K L L N					
765	774	783	792	801	810
CTC GGC CTT ATC ACA GAA AGC CAA GCA CAT ACA CTG GAA GAT GAA GTA GCA GAG					
L G L I T E S Q A H T L E D E V A E					

FIGURE 1B

819	GTT TTA CAA AAA	828	TCA AAG GAA GCC AAC AAT TAT GAG GAT CCC AAT	855	864
V L Q K L I S K E A N N Y E E D P N					
873	AAG CCC ACA AGC TGG ACT GAG AAT CAG GCT GGA AAA ATA CCA GAG AAA GTG ACT	891	900	909	918
K P T S W T E N Q A G K I P E K V T					
927	CCA ATG GCA GCA ATT CAA GAT GGT CTT GCT AAG GGA GAA AAC GAT GAA ACA GTA	945	954	963	972
P M A A I Q D G L A K G E N D E T V					
981	TCT AAC ACA TTA ACC TTG ACA AAT GGC TTG GAA AGG AGA ACT AAA ACC TAC AGT	999	1008	1017	1026
S N T L L T L T N G L E R R T K T Y S					
1035	GAA GAC AAC TTT GAG GAA CTC CAA TAT TTC CCA AAT TTC TAT GCG CTA CTG AAA	1053	1062	1071	1080
E D N F E E L Q Y F P N F Y A L L K					
1089	AGT ATT GAT TCA GAA AAA GAA GCA AAA GAG AAA GAA ACA CTG ATT ACT ATC ATG	1107	1116	1125	1134
S I D S E K E A K E K E T L I T I M					
1143	AAA ACA CTG ATT GAC TTT GTG AAG ATG ATG GTG AAA TAT GGA ACA ATA TCT CCA	1161	1170	1179	1188
K T L I D F V K M M V K Y G T I S P					

FIGURE 1C

1197	GAA GAA GGT GTT TCC TAC	1206	1215	1224	1233	1242
E E G V S Y L E N L D E M I A L Q T						
1251	AAA AAC AAG CTA GAA AAA AAT GCT ACT GAC AAT ATA AGC AAG CTT TTC CCA GCA	1260	1269	1278	1287	1296
K N K L E K N A T D N I S K L F P A						
1305	CCA TCA GAG AAG AGT CAT GAA GAA ACA GAC AGT ACC AAG GAA GAA GCA GCT AAG	1314	1323	1332	1341	1350
P S E K S H E E T D S T K E E A K						
1359	ATG GAA AAG GAA TAT GGA AGC TTG AAG GAT TCC ACA AAA GAT GAT AAC TCC AAC	1368	1377	1386	1395	1404
M E K E Y G S L K D S T K D D N S N						
1413	CCA GGA GGA AAG ACA GAT GAA CCC AAA GGA AAA ACA GAA GCC TAT TTG GAA GCC	1422	1431	1440	1449	1458
P G G K T D E P K G K T E A Y L E A						
1467	ATC AGA AAA AAT ATT GAA TGG TTG AAG AAA CAT GAC AAA AAG GGA AAT AAA GAA	1476	1485	1494	1503	1512
I R K N I E W L K K H D K G N K E						
1521	GAT TAT GAC CTT TCA AAG ATG AGA GAC TTC ATC AAT AAA CAA GCT GAT GCT TAT	1530	1539	1548	1557	1566
D Y D L S K M R D F I N K Q A D A Y						

FIGURE 1D

1575	1584	1593	1602	1611	1620
GTG GAG AAA GGC ATC CTT GAC AAG GAA GAA GCC GAG GCC ATC AAG CGC ATT TAT					
V E K G I L D K E E A E A I K R I Y					
1629	1638	1647	1656	1665	1674
AGC AGC CTG TAA AAA TGG CAA AAG ATC CAG GAG TCT TTC AAC TGT TTC AGA AAA					
S S L					
1683	1692	1701	1710	1719	1728
CAT AAT ATA GCT TAA AAC ACT TCT AAT TCT GTG ATT AAA ATT TTT TGA CCC AAG					
1737	1746	1755	1764	1773	1782
GGT TAT TAG AAA GTG CTG AAT TTA CAG TAG TTA ACC TTT TAC AAG TGG TTA AAA					
1791	1800	1809	1818	1827	1836
CAT AGC TTT CTT CCC GTA AAA ACT ATC TGA AAG TAA AGT TGT ATG TAA GCT GAA					
AAA AAA AA 3'					

FIGURE 1E

5'	CAG	CCG	CTG	GCT	CCG	TTT	CAC	TTC	CCA	GCC	ACC	CCC	GCT	GCT	ACC	ATG	ATC
	9					18		27		36		45				54	
	63	TGC	CAG	CCT	GGG	TGA	TGC	TTT	CTG	CAG	GGA	CTC	TTC	TGC	GCC	CGG	GCT
						72		81		90		99				108	
	117	GAA	GGG	CTC	CCA	GAC	ATC	ACC	TCT	GCC	CGC	CGC	CAC	CTC	CTC	CAA	CTC
						126		135		144		153				162	
	171	CTC	AGC	CGG	AGC	CGG	AGC	GCG	CAA	CAA	CCA	AGT	CCG	AGA	CTG	GAG	GCA
						180		189		198		207				216	
	225	GGG	GAG	GGG	AGA	AGC	GCC	AAG	CGC	GCT	GCC	CTC	CCA	GGG	AAA	CTC	ACT
						234		243		252		261				270	
	279	TAC	TCC	CAG	CCG	GCC	ACA	GTC	ACC	AGC	TCA	AAA	TGG	CGA	CGA	GAA	GGG
						288		297		306		315				324	
	333	CGG	CGC	TCC	GAC	CAC	CAT	CCA	CCT	ACT	AAG	GAA	GCG	CGC	TCT	GGC	CGG
						342		351		360		369				378	
	387	CGA	TTG	GTC	ACC	GCC	CGC	TAG	GGG	ACA	GCC	CTG	GCC	TCC	TCT	GAT	TGG
						396		405		414		423				432	
	441	CTG	GCC	ACC	TCC	CCA	CAC	CCC	TTT	CGA	ACG	CTC	CCC	TAG	TGG	AGA	AAA
						450		459		468		477				486	
																GGA	GTA

FIGURE 2A

495	504	513	522	531	540
GCT ATT AGC CAA TTC GGG CAG GGC CCG CTT TTT AGA AGC TTG ATT TCC TTT GAA					
549	558	567	576	585	594
GAT GAA AGA CTA GCG GAA GCT CTG CCG CTT TCC CCA GTG GGC GAG GGA ACT CGG					
603	612	621	630	639	648
GGC GAT TGG CTG GGA ACT GTA TCC ACC AAA TGT CAC CGA TTC TTC CTA TGC AGG					
657	666	675	684	693	702
AAA TGA GCA GAC CCA TCA ATA AGA AAT TTC TCA GCC TGG CCG AAA ATG GTT GGC					
711	720	729	738	747	756
CCC ACG AAG CCA CGA CAA CTG GAG GCA AAG AGG GTT GCT CAA CGC CCC GCC TCA					
765	774	783	792	801	810
TTG GAA AAC CAA ATC AGA TCT GGG ACC TAT ATA GCG TGG CGG AGG CGG GGC GAT					
819	828	837	846	855	864
GAT TGT CGC GCT CGC ACC CAC TGC AGC TGC GCA CAG TCG CAT TTC TTT CCC CGC					
873	882	891	900	909	918
CCC TGA GAC CCT GCA GCA CCA TCT GTC ATG GCG GCT GGG CTG TTT GGT TTG AGC					
		M	A	G	L
			A	L	F
					G
					L
					S

FIGURE 2B

927	GCT CGC CGT CTT TTG GCG GCA GCG ACG CGA GGG CTC CCG GGC GGC CGC GTC	936	945	963	972
A R R L L A A A A T R G L P A A R V					
981	CGC TGG GAA TCT AGC TTC TCC AGG ACT GTG GTC GCC CCG TCC GCT GTG GCG GGA	990	999	1008	1026
R W E S S F S F S R T V V A P S A V A G					
1035	AAG CGG CCC CCA GAA CCG ACC ACA CCG TGG CAA GAG GAC CCA GAA CCC GAG GAC	1044	1053	1062	1080
K R P P E P T T P W Q E D P E D					
1089	GAA AAC TTG TAT GAG AAG AAC CCA GAC TCC CAT GGT TAT GAC AAG GAC CCC GTT	1098	1107	1116	1134
E N L Y E K N P D S H G Y D K D P V					
1143	TTG GAC GTC TGG AAC ATG CGA CTT GTC TTC TTC TTT GGC GTC TCC ATC ATC CTG	1152	1161	1170	1188
L D V W N M R L V F F F G V S I I L					
1197	GTC CTT GGC AGC ACC TTT GTG GCC TAT CTG CCT GAC TAC AGG ATG AAA GAG TGG	1206	1215	1224	1242
V L G S T F V A Y L P D Y R M K E W					
1251	TCC CGC CGC GAA GCT GAG AGG CTT GTG AAA TAC CGA GAG GCC AAT GGC CTT CCC	1260	1269	1278	1296
S R R E A E R L V K Y R E A N G L P					

FIGURE 2C



1305	1314	1323	1332	1341	1350
ATC ATG GAA	TCC AAC TGC TTC GAC CCC AGC AAG ATC CAG CTG CCA GAG GAT GAG				
I M E S N C F D P S K I Q L P E D E					
1359	1368	1377	1386	1395	1404
TGA CCA GTT GCT AAG TGG GGC TCA AGA AGC ACC GCC TTC CCC ACC CCC TGC CTG					
1413	1422	1431	1440	1449	1458
CCA TTC TGA CCT CTT CTC AGA GCA CCT AAT TAA AGG GGC TGA AAG TCT GAA AAA					

AAA AA 3'

FIGURE 2D

1	M	G	F	L	G	T	G	T	W	I	L	V	L	V	L	-	-	-	P	I	Q	A	F	P	K	P	G	G	S	Q	2379427
1	M	G	F	L	W	T	G	S	W	I	L	V	L	V	L	N	S	G	P	I	Q	A	F	P	K	P	E	G	S	Q	GI 413764
28	D	K	S	L	H	N	R	E	L	S	A	E	R	P	L	N	E	Q	I	A	E	A	E	E	D	K	I	K	K	T	2379427
31	D	K	S	L	H	N	R	E	L	S	A	E	R	P	L	N	E	Q	I	A	E	A	E	A	D	K	I	K	K	A	GI 413764
58	Y	P	P	E	N	K	P	G	Q	S	N	Y	S	F	V	D	N	L	N	L	L	K	A	I	T	E	K	E	K	I	2379427
61	F	P	S	E	S	K	P	S	E	S	N	Y	S	S	V	D	N	L	N	L	L	R	A	I	T	E	K	E	T	V	GI 413764
88	E	K	E	R	Q	S	I	R	S	S	P	L	D	N	K	L	N	V	E	D	V	D	S	T	K	N	R	K	L	I	2379427
91	E	K	E	R	Q	S	I	R	S	P	P	F	D	N	Q	L	N	V	E	D	A	D	S	T	K	N	R	K	L	I	GI 413764
118	D	D	Y	D	S	T	K	S	G	L	D	H	K	F	Q	D	D	P	D	G	L	H	Q	L	D	G	T	P	L	T	2379427
121	D	E	Y	D	S	T	K	S	G	L	D	H	K	F	Q	D	D	P	D	G	L	H	Q	L	D	G	T	P	L	T	GI 413764
148	A	E	D	I	V	H	K	I	A	A	R	I	Y	E	E	N	D	R	A	V	F	D	K	I	V	S	K	L	L	N	2379427
151	A	E	D	I	V	H	K	I	A	T	R	I	Y	E	E	N	D	R	G	V	F	D	K	I	V	S	K	L	L	N	GI 413764
178	L	G	L	I	T	E	S	Q	A	H	T	L	E	D	E	V	A	E	V	L	Q	K	L	I	S	K	E	A	N	N	2379427
181	L	G	L	I	T	E	S	Q	A	H	T	L	E	D	E	V	A	E	A	L	Q	K	L	I	S	K	E	A	N	N	GI 413764

FIGURE 3A

208	Y	E	E	D	P	N	K	P	T	S	W	T	E	N	Q	A	G	K	I	P	E	K	V	T	P	M	A	A	I	Q	2379427
211	Y	E	E	T	L	D	K	P	T	S	R	T	E	N	Q	D	G	K	I	P	E	K	V	T	P	V	A	A	V	Q	GI 413764
238	D	G	L	A	K	G	E	N	D	E	T	V	S	N	T	L	T	L	T	N	G	L	E	R	R	T	K	T	Y	S	2379427
241	D	G	F	T	N	R	E	N	D	E	T	V	S	N	T	L	T	L	S	N	G	L	E	R	R	T	N	P	H	R	GI 413764
268	E	D	N	F	E	E	L	Q	Y	F	F	N	F	Y	A	L	L	K	S	I	D	S	E	K	E	A	K	E	K	E	2379427
271	E	D	D	F	E	E	L	Q	Y	F	F	N	F	Y	A	L	L	T	S	I	D	S	E	K	E	A	K	E	K	E	GI 413764
298	T	L	I	T	I	M	K	T	L	I	D	F	V	K	M	M	V	K	Y	G	T	I	S	P	E	E	G	V	S	Y	2379427
301	T	L	I	T	I	M	K	T	L	I	D	F	V	K	M	M	V	K	Y	G	T	I	S	P	E	E	G	V	S	Y	GI 413764
328	L	E	N	L	D	E	M	I	A	L	Q	T	K	N	K	L	E	K	N	A	T	D	N	I	S	K	L	F	P	A	2379427
331	L	E	N	L	D	E	T	I	A	L	Q	T	K	N	K	L	E	K	N	T	T	D	S	K	S	K	L	F	P	A	GI 413764
358	P	S	E	K	S	H	E	E	T	D	S	T	K	E	E	A	A	K	M	E	K	E	Y	G	S	L	K	D	S	T	2379427
361	P	P	E	K	S	Q	E	E	T	D	S	T	K	E	E	A	A	K	M	E	K	E	Y	G	S	L	K	D	S	T	GI 413764
388	K	D	D	N	S	N	P	G	G	K	T	D	E	P	K	G	K	T	E	A	Y	L	E	A	I	R	K	N	I	E	2379427
391	K	D	D	N	S	N	L	G	G	K	T	D	E	A	T	G	K	T	E	A	Y	L	E	A	I	R	K	N	I	E	GI 413764

FIGURE 3B

20H120-0402001

418	W	L	K	K	H	D	K	K	G	N	K	E	D	Y	D	L	S	K	M	R	D	F	I	N	K	Q	A	D	A	Y	2379427
421	W	L	K	K	H	N	K	K	G	N	K	E	D	Y	D	L	S	K	M	R	D	F	I	N	Q	Q	A	D	A	Y	GI 413764
448	V	E	K	G	I	L	D	K	E	E	A	E	A	I	K	R	I	Y	S	S	L										2379427
451	V	E	K	G	I	L	D	K	E	E	A	N	A	I	K	R	I	Y	S	S	L										GI 413764

FIGURE 3C

1	M	A	A	G	L	F	G	L	S	A	R	R	L	L	A	A	A	T	R	G	L	P	A	A	R	V	R	W	E	2744187	
1	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	R	G	L	P	A	A	R	V	R	W	E	GI 1771306		
31	S	S	F	S	R	T	V	V	A	P	S	A	V	A	G	K	R	P	P	E	P	T	P	W	Q	E	D	P	E	2744187	
13	S	-	-	S	R	A	V	I	A	P	S	G	V	E	K	K	R	Q	R	E	P	T	M	Q	W	Q	E	D	P	E	GI 1771306
61	P	E	D	E	N	L	Y	E	K	N	P	D	S	H	G	Y	D	K	D	P	V	L	D	V	W	N	M	R	L	V	2744187
41	P	E	D	E	N	V	Y	A	K	N	P	D	F	H	G	Y	D	S	D	P	V	V	D	V	W	N	M	R	A	V	GI 1771306
91	F	F	F	G	V	S	I	I	L	V	L	G	S	T	F	V	A	Y	L	P	D	Y	R	M	K	E	W	S	R	R	2744187
71	F	F	F	G	F	S	I	V	L	V	F	G	T	T	F	V	A	Y	V	P	D	Y	R	M	Q	E	W	A	R	R	GI 1771306
121	E	A	E	R	L	V	K	Y	R	E	A	N	G	L	P	I	M	E	S	N	C	F	D	P	S	K	I	Q	L	P	2744187
101	E	A	E	R	L	V	K	Y	R	E	V	N	G	L	P	I	M	E	S	N	Y	F	D	P	S	K	I	Q	L	P	GI 1771306
151	E	D	E	2744187																											
131	E	D	D	GI 1771306																											

FIGURE 4